ACES Monthly

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Many of you may have heard of some recent ACES-PM hardware problems. While there certainly was some inconvenience, the staffs at both SSG and DISA were able to respond quickly and minimize the impact to customers. The hardware failure, a first in five years, did highlight the problems of running both IWIMS and ACES when a few years ago the plan was to be enjoying server capacity freed up by the decommissioning of IWIMS.

ACES-Project Management – Crisis or Brilliant SSG Recovery?

Now for details on problem:

    1) The disk drive that controls the operation system for ACES PM failed. This is one of the worst case situations that can occur. The good news is it had no impact at all on the actual ACES PM data. It took roughly 6 hours to isolate the failure (and this was on Sunday) to a hardware problem.

    2) SSG notified DISA and Hewlett-Packard (Server manufacturer) that the problem was with hardware and at that point was somewhat at the mercy of their response, which was actually good. They replaced the bad drive on Monday afternoon. At that point DISA began a recovery operation to bring the new drive up to speed with where the other one was. This requires a "replay" of transactions that occurred since the last backup. (Unfortunately this drive is backed up weekly, on Saturdays, so a week's worth had to be recovered... quite labor intensive)

    3) After this was complete, SSG operations staff attempted to verify all was well and ran into problem with another drive. There were some corrupt indexes on it, probably caused by the failure of the operating system disk. They began the process of rebuilding the indexes (again a labor intensive effort) to ensure acceptable system performance when ACES PM came back on line. This work still failed to bring the system operation back to an acceptable level. At that point SSG chose to move ACES PM to a different platform with the intent to completely rebuild/reload the information on the original server.

    4) The move of the data to a new platform required the LAN shop at Gunter to send an "advisory" (this is electronic machine-to-machine stuff), that advised them that the ACES PM system is now at a new IP address. This did not require any action by users and took roughly 24 hours to complete. This action was done Friday afternoon, and some servers were updated before close of business on Friday. The rest were back on line 30 Oct 00.

All this activity caused some regrettable inconveniences both at MAJCOM and base level. For example, HQ AMC was in the middle of data conversion from IWIMS to ACES-PM when the server crashed, and as a result all AMC bases were off-line for much of the past week. Be assured, the problems we have recently experienced are hardware problems and not endemic to ACES-PM. Our goal, which we will soon reach despite Murphy's influence, is to provide accurate and reliable data to the entire USAF Civil Engineering community.

Preventative Measures?

First, it is NOT realistic to purchase additional hardware (nor cost effective) to be able to ensure system reliability regardless of hardware failure. Although some individuals feel the WANG days were superior, even those systems experienced unforeseen downtime. SSG is developing a contingency plan to handle a scenario where if a server goes down for hardware problem and an extended downtime is expected, data can be moved to another machine or machines to get the users back on line. But NOTE this is only if one server goes down, if more than one goes down SSG would not have space to "replatform" another set of systems. This will continue to be a problem as long as both ACES and IWIMS are maintained on the same platforms. The good news is hardware failures are rare and do not exhibit risks requiring more attention. SSG scheduled a meeting with DISA early Nov 00 to coordinate this

contingency plan. In the meantime the server that had ACES PM on it will be rebuilt, and SSG will decide how it will be used.

Data availability is paramount to our complex operations. This topic will be covered during the 11 Jan 01 ASG. MAJCOM representatives should be canvassing their own MAJCOMs for Air Force Portal, consolidated e-mail servers, and other possible points of failure in the network. Increasing both size and redundancy of our servers is quite feasible, just frightfully expensive. Happy Halloween!

IT Wisdom
"Exactly what you want always costs more than what you can afford – whether it's technology or IT employees"

Frank Hayes - ComputerWorld